NEWS RELEASE

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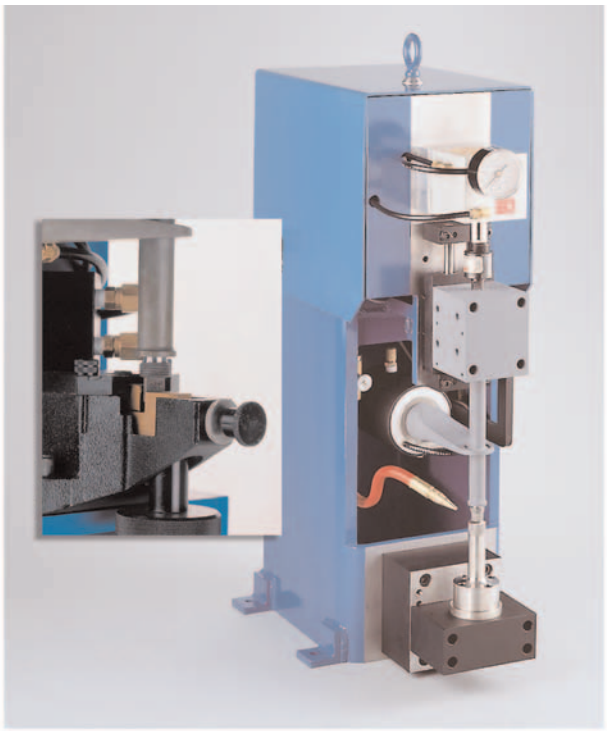
Ultrasonics Provides Axiom Group with Top Quality Welds for Wire Harness Assembly



Sonobond's ultrasonic metal spot welder can be equipped with a special tooling for wire harness assembly (inset)

WEST CHESTER, Pennsylvania – When the Axiom Group of Companies launched their new electronics division in 2000, ultrasonics was the only assembly method they considered to provide the high quality metal welds required for their product. The Ontario, Canada company manufactures wire harnesses and plastic components for automotive door mechanisms.

John Cresnik, General Manager of the Axiom Group, who had previous experience with mechanical crimping and soldering of splices on wire harnesses, determined that a superior assembly method needed to be utilized. Sonobond Ultrasonics, headquartered in West Chester, Pennsylvania, had the solution. Their MH2014D metal spot welder with tooling for wire splicing provided the reliable, solid-state metallurgical bonds Axiom required.

"Mechanical assembly involves several steps as the wire is spliced using a clip and solder method," says Cresnik. "With Sonobond's equipment, there is no secondary operation, and no need for solder or mechanical terminals. As a result, we are experiencing increased productivity and lower cost."

Sonobond's precision welding system uses their patented Wedge-Reed technology—a coupling system that utilizes high clamp force, and low vibratory amplitude sonics, along with ultrasonic energy that's directed in a shear mode…an essential requirement for metals being ultrasonically welded. According to Janet Devine, President of Sonobond Ultrasonics, "Our welders are

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configured to provide the shear motion while putting the line of force directly over the parts to be welded. That's a distinct advantage over Lateral Drive technology, which is cantilevered." Sonobond's equipment performs spot welds in a single pulse, and with additional tooling, also provides wire-to-terminal welding. Adds Devine, "Although Axiom's application involves just 3 wires, our welder is the only one that can join up to 10 stranded wires from a flat flexible circuit to multi-connection terminals, in just one pulse."

An additional advantage of Sonobond's metal welding equipment is that it is available with advanced weld control systems, including a microprocessor-controlled digital unit that allows for the selection of welding modes by time, energy and distance. Since Axiom's application does not require distance-measuring capability, they use Sonobond's TDM-VI-A energy monitor/controller which according to Cresnik, ensures weld quality and allows for better overall control. "The set up operator can set weld parameters by time and energy." Then, if a weld doesn't fall within the preset limits, an alarm is sounded to alert the operator of an unacceptable weld.

Unlike mechanical assembly methods, ultrasonics allows Axiom the flexibility to weld a variety of wire combinations. "With mechanical crimping," says Cresnik, "different terminals are needed for different wire combinations. The Sonobond system is a low-maintenance system that allows weld protocols to be changed without downtime."

Sonobond's Leadership

Sonobond Ultrasonics is a worldwide leader in the application of ultrasonic bonding technology. In 1960, Sonobond, formerly known as Aeroprojects, received the first patent ever awarded for ultrasonic metal welding. Sonobond also provides ultrasonic bonding equipment for textile and plastic assemblies.

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